Oracle® Application Server

Installation Guide

Release 4.0.8.1 for Windows NT

September 1999

Part No. A58756-03

ORACLE®

Oracle Application Server Release 4.0.8.1 Installation Guide for Windows NT

Part No. A58756-03

Contents

4 Migrating From Previous Versions

A Integration with Enterprise Manager

Index

Preface

This chapter contains general documentation information about Oracle Application Server, including other books available, conventions used in this manual, and contact information at Oracle.

Audience

This installation guide is intended for database administrators and others responsible for installing Oracle products. You should be familiar with client/server relationships and database concepts.

The Oracle Application Server Documentation Set

This table lists the Oracle Application Server documentation set.

Title of Book	Part No.
Oracle Application Server 4.0.8 Documentation Set	A66971-03
Oracle Application Server Overview and Glossary	A60115-03
Oracle Application Server Installation Guide for Sun SPARC Solaris 2.x	A58755-03
Oracle Application Server Installation Guide for Windows NT	A58756-03
Oracle Application Server Administration Guide	A60172-03
Oracle Application Server Security Guide	A60116-03
Oracle Application Server Performance and Tuning Guide	A60120-03
Oracle Application Server Developer's Guide: PL/SQL and ODBC Applications	A66958-02
Oracle Application Server Developer's Guide: JServlet Applications	A73043-01
Oracle Application Server Developer's Guide: LiveHTML and Perl Applications	A66960-02

Title of Book	Part No.
Oracle Application Server Developer's Guide: EJB, ECO/Java and CORBA Applications	A69966-01
Oracle Application Server Developer's Guide: C++ CORBA Applications	A70039-01
Oracle Application Server PL/SQL Web Toolkit Reference	A60123-03
Oracle Application Server PL/SQL Web Toolkit Quick Reference	A60119-03
Oracle Application Server JServlet Toolkit Reference	A73045-01
Oracle Application Server JServlet Toolkit Quick Reference	A73044-01
Oracle Application Server Cartridge Management Framework	A58703-03
Oracle Application Server 4.0.8.1 Release Notes	A66106-04

Conventions

This table lists the typographical conventions used in this manual.

Convention	Example	Explanation
bold	**oas.h** **owsctl** **wrbcfg** **www.oracle.com**	Identifies file names, utilities, processes, and URLs
italics	*file1*	Identifies a variable in text; replace this place holder with a specific value or string.
angle brackets	`<filename>`	Identifies a variable in code; replace this place holder with a specific value or string.
courier	`owsctl start wrb`	Text to be entered exactly as it appears. Also used for functions.
square brackets	`[-c string]`	Identifies an optional item.
	`[on|off]`	Identifies a choice of optional items, each separated by a vertical bar (|), any one option can be specified.
braces	`{yes|no}`	Identifies a choice of mandatory items, each separated by a vertical bar (|).
ellipses	n,...	Indicates that the preceding item can be repeated any number of times.

The term "Oracle Server" refers to the database server product from Oracle Corporation.

The term **"oracle"** refers to an executable or account by that name.

The term "*oracle*" refers to the owner of the Oracle software.

Technical Support Information

Oracle Global Support can be reached at the following numbers:

- In the USA: **Telephone: 1.650.506.1500**

- In Europe: **Telephone: +44 1344 860160**

- In Asia-Pacific: **Telephone: +61. 3 9246 0400**

Please prepare the following information before you call, using this page as a check-list:

❏ your CSI number (if applicable) or full contact details, including any special project information

❏ the complete release numbers of the Oracle Application Server and associated products

❏ the operating system name and version number

❏ details of error codes and numbers and descriptions. Please write these down as they occur. They are critical in helping WWCS to quickly resolve your problem.

❏ a full description of the issue, including:

- **What** - What happened? For example, the command used and its result.

- **When** -When did it happen? For example, during peak system load, or after a certain command, or after an operating system upgrade.

- **Where** -Where did it happen? For example, on a particular system or within a certain procedure or table.

- **Extent** - What is the extent of the problem? For example, production system unavailable, or moderate impact but increasing with time, or minimal impact and stable.

❏ Keep copies of any trace files, core dumps, and redo log files recorded at or near the time of the incident. WWCS may need these to further investigate your problem. For a list of trace and log files, see "Configuration and Log Files" in the *Administration Guide.*

For installation-related problems, please have the following additional information available:

❑ listings of the contents of $ORACLE_HOME (Unix) or %ORACLE_HOME% (NT) and any staging area, if used.

❑ installation logs (**install.log**, **sql.log**, **make.log**, and **os.log**) typically stored in the **$ORACLE_HOME/orainst** (Unix) or **%ORACLE_HOME%\orainst** (NT) directory.

Documentation Sales and Client Relations

In the United States:

■ To order hardcopy documentation, call Documentation Sales: **1.800.252.0303.**

■ For shipping inquiries, product exchanges, or returns, call Client Relations: **1.650.506.1500.**

In the United Kingdom:

■ To order hardcopy documentation, call Oracle Direct Response: **+44 990 332200.**

■ For shipping inquiries and upgrade requests, call Customer Relations: **+44 990 622300.**

Reader's Comment Form

Oracle Application Server Installation Guide for Windows NT
Part No. A58756-03

Oracle Corporation welcomes your comments and suggestions on the quality and usefulness of this publication. Your input is an important part of the information used for revision.

- Did you find any errors?

- Is the information clearly presented?

- Do you need more information? If so, where?

- Are the examples correct? Do you need more examples?

- What features did you like most about this manual?

If you find any errors or have suggestions for improvement, please indicate the topic, chapter, and page number below:

Please send your comments to:

Oracle Application Server Documentation Manager
Oracle Corporation
500 Oracle Parkway
Redwood Shores, CA 94065

If you would like a reply, please provide your name, address, and telephone number below:

Thank you for helping us improve our documentation.

x

1

Pre-Installation

This chapter contains required hardware and software, database integration information, and supported configurations. Also discussed in this chapter are pre-installation tasks, such as setting up a proper environment using variables, which must be performed for a successful installation.

> **Note:** If you want to configure Oracle Application Server to be used with the Enterprise Manager, you should install the Enterprise Manager first. See Appendix A, "Integration with Enterprise Manager" for information.

Contents

- Hardware Requirements
- Software Requirements
- Certified Software
- Using Oracle Application Server with a Database
- Multiple-Node Site
- Pre-Installation Notes

Hardware Requirements

Hardware Item	Required
CPU	An Intel compatible 486 or higher processor
Memory	128 MB
Disk Space	170MB
Swap Space	256 MB

Software Requirements

Software Item	Version
Operating System	NT Server 4.0 with version 1280 of Service Pack 5 (certified for deployment)
	NT Workstation 4.0 with Service Pack 5 (certified for development only)
Browser	Microsoft Internet Explorer: 5.0
	Netscape Communicator: 4.51, 4.6

Certified Software

Software Item	Version
HTTP Listeners	Oracle Listener 4.0.8.0.0 (Spyglass 2.14) Netscape Enterprise Server 3.6.2
	Microsoft Internet Information Server 4.0
Oracle RDBMS	7.3.4 8.0.5.1 8.1.5
JAVA Developer Kit (JDK)	1.1.6

Using Oracle Application Server with a Database

Selecting an ORACLE_HOME

What is an ORACLE_HOME?

ORACLE_HOME is the root or base directory in which Oracle software is installed. Oracle Application Server cannot share the same ORACLE_HOME with any other Oracle products. If you already have an Oracle database or earlier versions of Oracle Application Server, then Oracle Application Server 4.0.8 must be installed in a different ORACLE_HOME directory.

> **Note:** Oracle Application Server 4.0.8 cannot be installed in the same ORACLE_HOME as **any** other Oracle products including RDBMS and earlier versions of Oracle Application Server. Hence, during Oracle Application Server 4.0.8 installation, you need to specify a different ORACLE_HOME.

What are the Required Oracle Products?

The following table lists the required installed Oracle products and minimum release levels for using Oracle Application Server with an Oracle database.

Table 1–1   Installed Oracle products

Product	Minimum Release	Installed Automatically?
Oracle RDBMS	7.3.4	No
OTS	8.0.5	Yes (Enterprise edition)
PL/SQL	2.1.6	No
SQL*Net	8.0.5	Yes
TCP/IP Protocol Adaptor	8.0.5	Yes
Server Manager (line mode)	3.0.5	Yes

Note: There are no required Oracle products for installing Oracle Application Server as a standalone Internet server.

Remote Database Installation

To access an Oracle database on a remote machine, install the products listed above on the remote machine.

On your local machine, you must also install SQL*Net and the TCP/IP Protocol Adapter provided on the Oracle Application Server CD.

Local Database Installation

To install Oracle Application Server as a stand-alone Internet server, and to access a database on your local machine, you only need to install an Oracle database and PL*SQL.

> **Note:** To use either Oracle8 or the Multi-Threaded Server option to connect to a local database, install SQL*Net 2.3 and the TCP/IP Protocol Adapter, which are bundled with Oracle Application Server Release 4.0.8.

Multiple-Node Site

Oracle Application Server can be installed as a single-node, where all components are installed on a single computer; or as a multi-node, which consists of a primary-node installed on one computer and one or more remote-nodes installed on different computers. Each remote node must have Oracle Application Server installed.

> **Note:** An Oracle Application Server site must reside within one subnet.

Oracle Application Server is made up of several components, each of which may be run on different machines in a network. Three advantages of distributing processes on different machines are performance, scalability, and flexibility.

See the *Oracle Application Server Performance and Tuning Guide* for additional information.

Pre-Installation Notes

Before installing, consider the following points:

- During installation, the installer removes the environment variables ORAWEB_HOME, ORAWEB_SITE, and ORAWEB_ADMIN if they exist.

- During installation, the service OracleStartOAS4.0(*ORACLE_HOME*, *ORAWEB_SITE*) is installed and set to Manual. This service can be set to Automatic so that Oracle Application Server starts up automatically upon reboot. This service functions on either a Primary node or a Remote node running cartridges in a Multi-Node setup.

  This service should not be used for starting Oracle Application Server from the Services Panel, as this service does not implement all NT service functions required by the NT service control manager.

  Note that OracleStartOAS4.0(*ORACLE_HOME*, *ORAWEB_SITE*) can only function properly on a Remote node if the Primary node is already UP.

- Some OAS Cartridges (for example, LiveHTML, PLSQL) and JCO objects will try to expand some environmental variables (CLASSPATH, JAVA_HOME etc.) Currently there is a 512 byte limitation on the length of the expanded variable (that is, with macros like %CLASSPATH% fully substituted with their actual values). For this reason make sure that your existing environment variables are not longer than 250-300 characters.

- If you plan to use Oracle Application Server with a remote database, you must set the TNS_ADMIN variable to the location of the **tnsnames.ora** file before installation.

- If you will need to access an NLS database, you must set the NLS_LANG variable in the environment using the Control Panel. Double-click on the System icon and select the Environment tab.

- Oracle Application Server uses the directories **%TEMP_DIR%\src** (e.g. **C:\temp**) and **%TEMP_DIR%\classes** (e.g. **C:\classes**) for generation and compilation of intermediate files during deployment. Before proceeding with deployment, Oracle Application Server cleans up (deletes the contents of) these directories. For this reason, do not store files in either of these two directories.

2

Installation Procedures

Installation of Oracle Application Server is divided into two stages. First, you must start the Oracle Installer, the tool that guides you through the installation process. The second stage is the installation of Oracle Application Server itself, a process which has several options.

Contents

Starting the Oracle Installer

At any time during the installation, you can select the Help button to receive additional information about the installation forms.

> **Note:** Oracle Application Server 4.0.8 cannot be installed in the same ORACLE_HOME as **any** other Oracle products including RDBMS and earlier versions of Oracle Application Server. Hence, during Oracle Application Server 4.0.8 installation, you need to specify a different ORACLE_HOME.

Installation Log File

To view the log file for the installation, see:

%ORACLE_HOME%\orainst\install.log

> **Security Issue:** The log file created during installation contains the admin password. Oracle Application Server sets the permission on the log file so that only the admin user can read it.

Installation Steps

1. Stop all Oracle processes and services (for example, the Oracle RDBMS).

2. Run the Installer from the CD-ROM.

   When you insert the Oracle Application Server CD-ROM into the CD-ROM drive, the Windows "auto run" feature automatically starts the Oracle Installer program.

   If your CD-ROM drive does not support the auto run feature, you will need to locate the following directory:
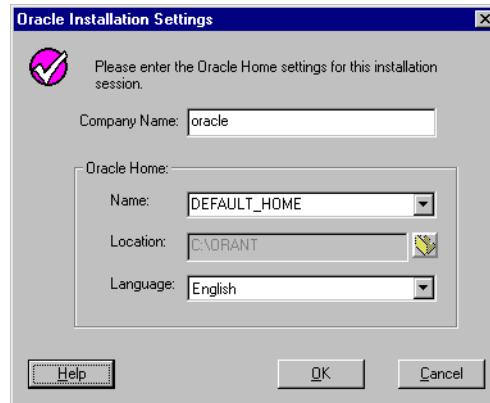
   G:\NT_X86

   where "**G**" is the letter of your cdrom drive

   and launch the **SETUP.EXE** program, which starts the Oracle Installer.

3. Enter installation settings.

Figure 2–1   Oracle Installation Settings

> **Note:**   If you install multiple Oracle products, you must install
> using different ORACLE_HOMEs. The ORACLE_HOME environ-
> ment variable must **not** be set in the System or in the User environ-
> ment sections. Doing so will cause the installed Oracle products to
> function incorrectly.

a. During installation, enter a new ORACLE_HOME name in the Installation
Settings screen (see Figure 2–1, "Oracle Installation Settings").

The ORACLE_HOME name can be a string of less than 16 alphanumeric
characters possibly separated with underscores. The Home name is stored
in the registry as ORACLE_HOME_NAME.

b. Enter a different location for the new ORACLE_HOME.

Upon creation of a new home, the Installer updates the system path with
the target home's **bin** directory. When the default home is created, the path
is automatically updated, and you will be notified at the end of the installa-
tion session of the change. When subsequent homes are created, the new
target home's **bin** directory is added to the path, and you will be asked to
confirm the order in which the various home paths are added to the system
path. The Installer always updates the system path to ensure that the most
recent home's **bin** directory precedes the other home paths.

The home location points to the sub-directory under which products are installed. The home location is set in ORACLE_HOME_PATH. The ORACLE_HOME variable is still set in both the Installer and the registry for backward compatibility. The default value for the home location is the largest available local drive.

c. Select the language.

This is both the language in which the installer is currently running and the language whose character set information will be stored in the home's NLS_LANG registry variable. The target home language is set in ORACLE_HOME_LANGUAGE. Here you can specify the language of a new home or change the language of a particular home. The default is the operating system language.

d. Select OK.

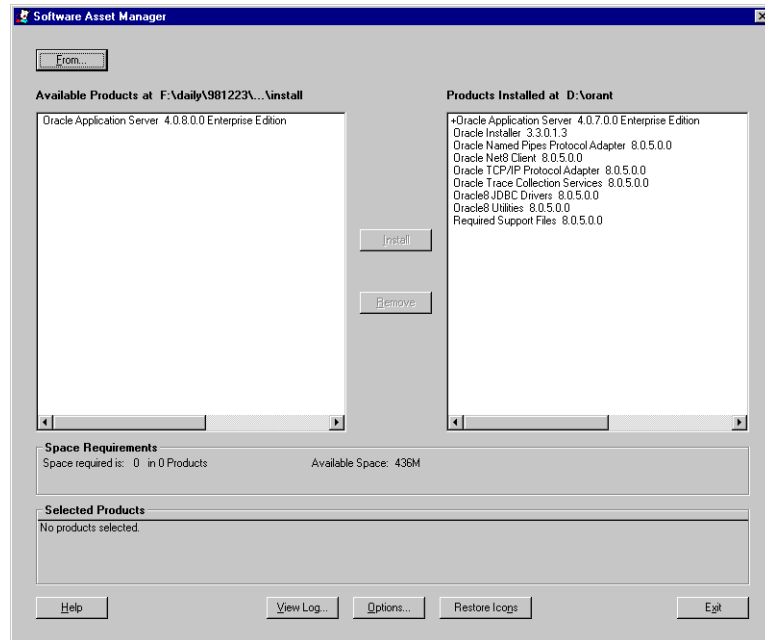> **Note:** See the Post Installation chapter after installing Oracle Application Server for further instructions for creating a new ORACLE_HOME.
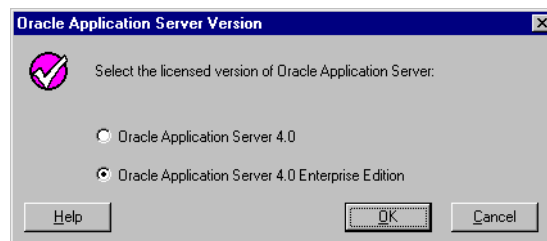
4. Select Oracle Application Server in the Software Asset Manager and click Install.

Figure 2–2   Software Asset Manager

5. Select the version of Oracle Application Server for which you have a license.

Figure 2–3   Selecting your version of Oracle Application Server

> **Note:** The installation of Oracle Transaction Service (an Enterprise Edition feature) has a runtime dependency on Oracle8 Client.

Installation Procedures

At this point in the installation, you are prompted with a form that asks you if you are performing a Complete or Custom Installation. Based on your response, there are several installation options.

Use the following table to select which documentation section is suitable to you:

Installation Task	Description	Documentation Section
Complete	Installation with all cartridges.	"Standard Installations" on page 2-7
Custom Installation of a Single-node	The Web Request Broker (WRB), Web Listener, and selected cartridges are installed on the same machine.	"Standard Installations" on page 2-7
Custom Installation of the Primary node in a Multi-node setup	The primary node is where your WRB and configuration files are installed. Cartridges are also installed on this node for administration and configuration.	"Standard Installations" on page 2-7
Custom Installation of the Remote Node in a Multi-Node Setup	Allows you to specify which components of Oracle Application Server (Listener and/or Cartridges) you want for a remote node.	"Custom Installation of the Remote Node in a Multi-Node Setup" on page 2-14
Complete Reinstallation	Overrides all previously entered information.	"Standard Installations" on page 2-7
Partial Reinstallation	Allows you to go step-by-step through the reinstallation process.	"Reinstallation Options" on page 2-21
Removing Oracle Application Server	Also known as deinstallation and uninstallation.	"Removing Oracle Application Server" on page 2-29

> **Note:** For information about performance benefits from a multi-node site, see the *Performance and Tuning Guide*.

> **Note:** The Complete installation automatically installs the Wallet Manager Tool. For more information, see the *Security* guide.

Standard Installations

A standard installation includes all of the following:

- Complete Installation

- Custom Installation of a Single-node

- Custom Installation of the Primary node in a Multi-node setup

> **Note:** If you are performing a multi-node installation, you will need to repeat the installation procedure for each node. That is, you can only install one node with each pass through the Oracle Installer. Each pass must be run on the individual node.
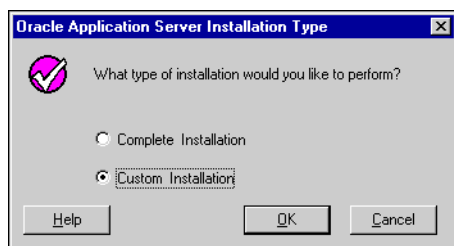
- Complete Reinstallation

> **Note:** Before performing a Complete Reinstallation, you must stop all Oracle processes and services. For a list of Oracle processes that are running, use the NT Task Manager; for a list of services, select Services from the Control panel.
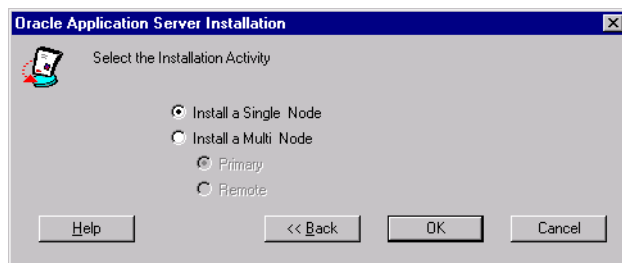
1. Select Oracle Application Server in the Software Asset Manager window and click Install (if you have not already done so).

2. Select Complete or Custom Installation.

Figure 2–4   Installation types

- ■ **COMPLETE,** skip to step 5.
- ■ **CUSTOM**, continue.

3. Select Install a Single Node or Install a Multi Node - Primary.

   (You will only receive this screen if you selected a CUSTOM Installation.)
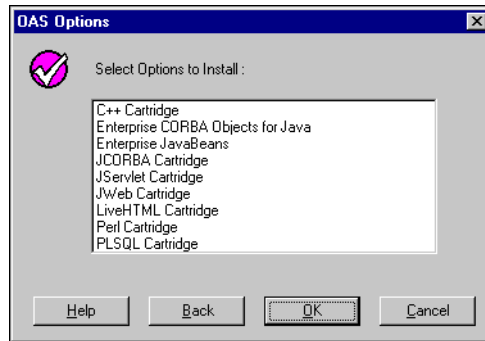
Figure 2–5   Selecting an installation activity

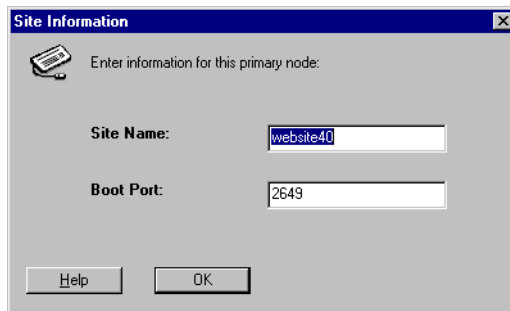**4.** Select which options/cartridges you want to install on this node.

Figure 2–6   Options/cartridges

For a description of each cartridge, see the *Oracle Application Server Overview.*

5. Enter information about your site.
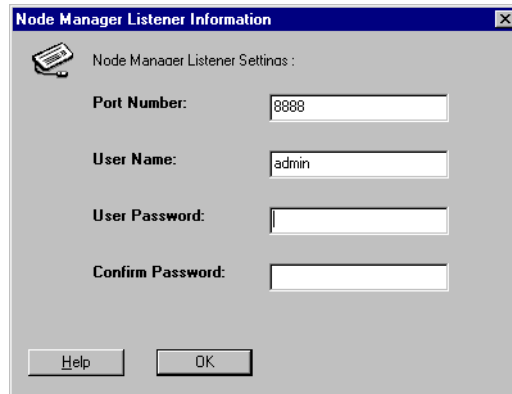
Figure 2–7   Site information

- **Site Name** - Defaults to "website40". Oracle Application Server allows you to have multiple server sites running in a single installation environment. Servers are differentiated by site names, so you must enter the current Web server by site name. If you are **migrating** from previous versions, you must use a different name than the one used for the previous version. The site name should be the same in all nodes which comprise a site.

- **Boot Port** - Defaults to 2649. Select a port that is not being used by another process.

The Installer uses the boot port you specify and the next two consecutive ports. For example, if you select port 2649, be sure that ports 2650 and 2651 are also available.

6. Enter information about the Node Manager Listener.
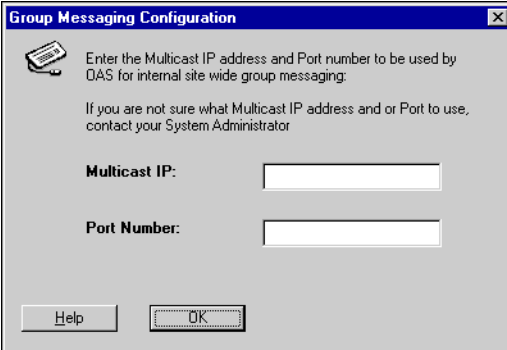
Figure 2–8   Node Manager Listener settings

The Node Manager Listener is the Web-based tool used to administer all components of the Oracle Application Server (except for the Web Request Broker). It must be present on each node in a multi-node site. This listener cannot execute cartridges and is not configurable.

- **Port Number** - Enter a network port for the Node Manager Listener. The default port number is **8888**, but any available port may be used. The valid range is between 1 and 65535. If you are migrating from previous versions or installing more than one version of Oracle Application Server on one machine, you **must** select a different port than the one used for the previous version. Select a port that is not being used by another process.

- **User Name** - This is the name of the Oracle Application Server user who will perform administration tasks using the Oracle Application Server Manager. The default value is "admin", but any user name may be used.

- **User Password** - Enter a password for the admin user. You will be asked to enter your password twice for confirmation. There is no default value for this password. This password will also be used to authenticate for the Administration Utilities Listener and the Wallet Manager.

- **Confirm Password** - Enter the password again for confirmation.

7. Enter Group Messaging information. Enter the Multicast IP address and Port number to be used for internal site wide group messages. After entering a valid IP address and Port number, make note of the numbers. If you plan to setup remote nodes, you will need the information during the remote node installation. If you forget to record the IP Address and Port number, you can use the OASMCASTCFG utility to display the numbers. See the Administration Guide for more information.

*Figure 2–9   Group Messaging screen*

Oracle Application Server requires a designated IP address and port number for internal communication between components.

- **IP Address** - Enter an IP address not being used. The valid range is from 225.0.0.0 to 239.255.255.255.

- **Port Number** - Enter a port number not currently being used. By default, the following ports are used by Oracle Application Server:

Table 2–1   Ports used

Ports Used	Component
80 (default)	Web Listener
8888 (default)	Node Manager Listener
8889 (by default, Node Manager port + 1)	Admin Utility Listener
2649 (default)	Boot Port
2650, 2651 (by default, the Installer uses the Boot Port plus the next two ports)	Installer

8. Enter information about the Administration Utilities Listener.

Figure 2–10   Administration Utility Listener information
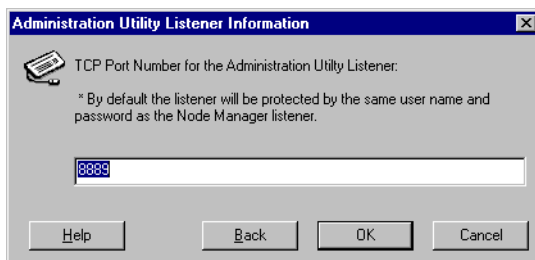
The Administration Utilities Listener interacts with the WRB and therefore is able to run administration utilities such as the Log Analyzer.

- **Port Number** - Enter a network port for the Administration Listener. The default is 8889, but any available port may be used. The valid range is between 1 and 65535. If you are migrating from previous versions or installing more than one version of Oracle Application Server on one machine, you **must** select a different port than the one used for the previous version. Select a port that is not being used by another process.

9. Enter information about the Web Listener.

Figure 2–11   Web Listener Configuration screen
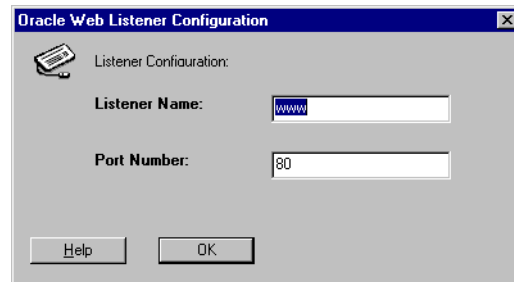
- **Web Listener Name** - During installation, a web listener is set up for general usage requests. The default Web Listener name is "www".

- **Port Number** - Enter the port number on which this listener should run (the default port is 80). Select a port that is not being used by another process. If you are migrating from previous versions or installing more than one version of Oracle Application Server on one machine, you **must** select a different port than the one used for the previous version.

10. Select the Oracle8 JDBC Drivers you want to install.

Figure 2–12   Selecting Oracle8 JDBC Drivers
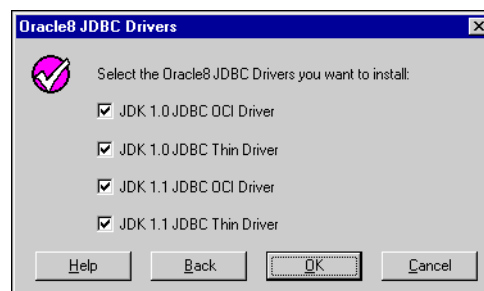
11. Reboot your machine.

> **Note:** During installation, a service is created for the Node Manager (Oracle Web NodeManager 4.0) and is automatically set to "Automatic", so that the Node Manager starts up each time you boot the machine. If you install two or more Oracle Application Servers in separate ORACLE_HOMEs on the same machine, you **must** change the Startup Type of one of the Node Manager services to "Manual".

YOU HAVE COMPLETED THE INSTALLATION! See Chapter 3, "Post-Installation Tasks" to configure Oracle Application Server.

Custom Installation of the Remote Node in a Multi-Node Setup

For a description of the performance benefits of a multiple node site, see the *Performance and Tuning Guide.*

You will need to repeat the installation procedure for each remote node. That is, you can only install one node with each pass through the Oracle Installer. Each pass must be run on the individual node.

Overview

In a remote multi-node installation, you are able to select which component(s) to install on the node:

- Oracle Web Listener
- Oracle Web Request Broker
- OAS Options (Cartridges)

For a description of these components, see the *Oracle Application Server Overview.*

> **Note:** The configuration files **site.app** and **wrb.app** and the application **.app** files can only be created and managed on a primary node.

By default, cartridges are configured to run on all WRB nodes. The limitation is that cartridges need to be installed on specified nodes, otherwise, an error occurs when you try to execute a cartridge that has not yet been installed.

The components installed in a single-node (stand-alone) setup are the same as those installed in a primary multi-node installation. The only difference is that you can customize the list of cartridges you wish to install on a primary multi-node installation.
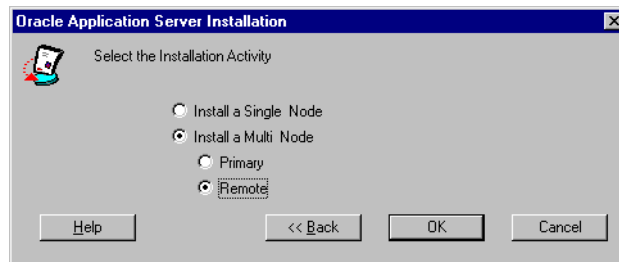
To install a remote node:

1. Select Custom Installation.

Figure 2–13   Installation types
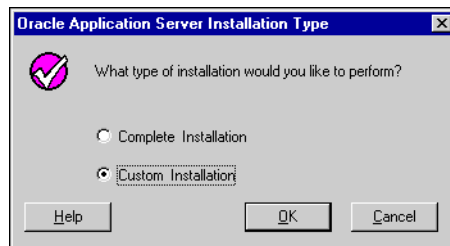
2. Select Install a Multi Node - Remote.

Figure 2–14   Multi-node remote
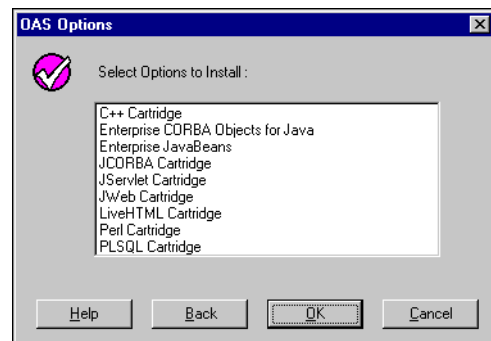
3. Choose which components to install on this remote node.

Figure 2–15   Product components
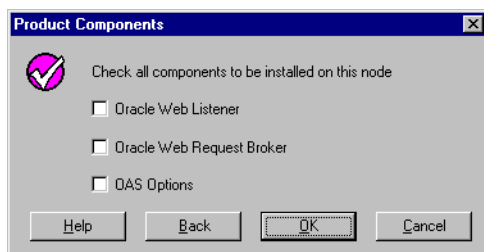
4. Select which options/cartridges you want installed on this node. For a description of each cartridge, see the *Oracle Application Server Overview.*

(You will only receive this form if you elected to install cartridges in the previous step.)
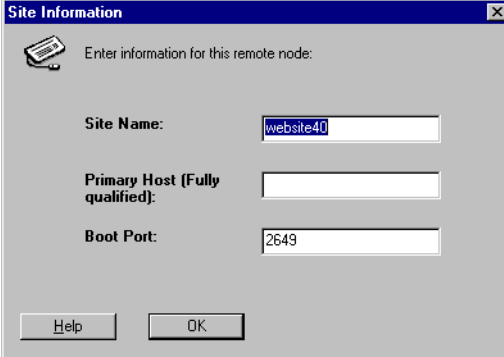
Figure 2–16   Optional cartridges

5. Enter information about your site.

Figure 2–17   Site information

- ■ **Site Name** - Defaults to "website40". Oracle Application Server allows you
  to have multiple server sites running in a single installation environment.
  Servers are differentiated by site names, so you must enter the current Web
  server by site name. The site name should be the same in all nodes which
  comprise a site.

- ■ **Primary Host (Fully-qualified)** - Enter the fully-qualified hostname of the
  primary node in this multi-node installation. ("Fully-qualified" is of the
  form *hostname.domain.*)

- ■ **Boot Port** - Defaults to 2649. Select a port that is not being used by another
  process. The Installer uses the boot port you specify and the next two con-
  secutive ports. For example, if you select port 2649, be sure that ports 2650
  and 2651 are also available. If you are migrating from previous versions or
  installing more than one version of Oracle Application Server on one
  machine, you **must** select a different port than the one used for the previ-
  ous version.

6. Enter information about the Node Manager Listener.

Figure 2–18   Node Manager Listener settings

The Node Manager Listener is the Web-based tool used to administer all components of the Oracle Application Server (except for the Web Request Broker). It must be present on each node in a multi-node site. This listener cannot execute cartridges and is not configurable.

- **Port Number** - Enter a network port for the Node Manager Listener. The default port number is **8888**, but any available port may be used. The valid range is between 1 and 65535. Select a port that is not being used by another process, including another version of Oracle Application Server Release 4.0.8.1.

- **User Name** - This is the name of the Oracle Application Server user who will perform administration tasks using the Oracle Application Server Manager. The default value is "admin", but any user name may be used.

- **User Password** - Enter a password for the admin user. You will be asked to enter your password twice for confirmation. There is no default value for this password. This password will also be used to authenticate for the Administration Utilities Listener.

- **Confirm Password** - Enter the password again for confirmation.

7. Enter information about the Oracle Web Listener.

(You will only receive this form if you elected to install the Oracle Web Listener in step 3.)

Figure 2–19   Web Listener configuration

- **Web Listener Name** - During installation, a web listener is set up for general usage requests. The default Web Listener name is "www".

- **Port Number** - Enter the port number on which this listener should run (for the Oracle Web Listener, the default port is **80**). Select a port that is not being used by another process. If you are migrating from previous versions or installing more than one version of Oracle Application Server on one machine, you **must** select a different port than the one used for the previous version.

8. Enter Group Messaging information. Enter the Mulicast IP address and Port number to be used for internal site wide group messages. After entering a valid IP address and Port number, make note of the numbers. If you plan to setup remote nodes, you will need the information during the remote node installation. If you forget to record the IP Address and Port number, you can use the

OASMCASTCFG utility to display the numbers. See the Administration Guide for more information.

Figure 2–20   Group Messaging screen
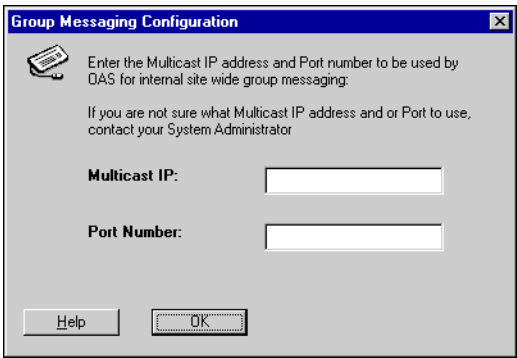
Oracle Application Server requires a designated IP address and port number for internal communication between components.

- **IP Address** - Enter an IP address not being used. The valid range is from 225.0.0.0 to 239.255.255.255.

- **Port Number** - Enter a port number not currently being used. By default, the following ports are used by Oracle Application Server:

Table 2–2   Ports used

Ports Used	Component
80 (default)	Web Listener
8888 (default)	Node Manager Listener
8889 (by default, Node Manager port + 1)	Admin Utility Listener
2649 (default)	Boot Port
2650, 2651 (by default, the Installer uses the Boot Port plus the next two ports)	Installer

YOU HAVE COMPLETED THE INSTALLATION! See Chapter 3, "Post-Installation Tasks" to configure Oracle Application Server.

Reinstallation Options

Once the product is installed, you may perform the following reinstallation tasks:

- Custom > **Add Components** - This option, which is only available if a previous version of Oracle Application Server 4.x is detected, allows you to add components to the current site. For more information, see the section "Add Components" on page 2-22.

Retain Current Settings Option

1. Select Oracle Application Server in the Software Asset Manager window and click Install.

2. Select the version of Oracle Application Server for which you have a license.

Figure 2–21   Selecting your version of Oracle Application Server

3. Select Complete or Custom Installation.

Figure 2–22   Installation types
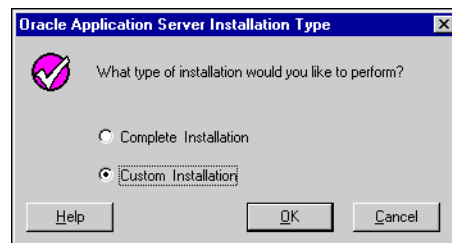
4. Select Retain current settings.

(This form will appear only if a previous installation of Oracle Application Server 4.x is detected.)

Figure 2–23   Reinstall Options
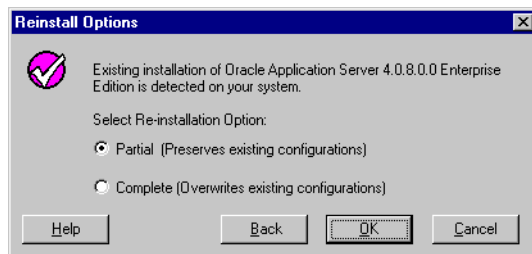
5. The Installer will prompt you to confirm the reinstallation of any products already installed.

YOU HAVE COMPLETED THE REINSTALLATION! See Chapter 3, "Post-Installation Tasks" to configure Oracle Application Server.

Add Components

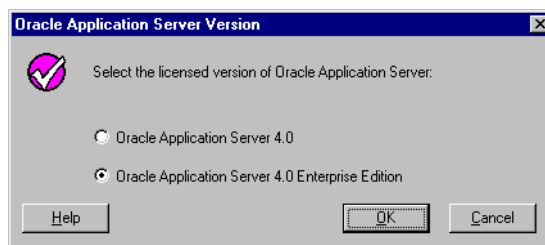**1.** Select Oracle Application Server in the Software Asset Manager window and click Install.

2. Select Custom Installation.

Figure 2–24   Installation type
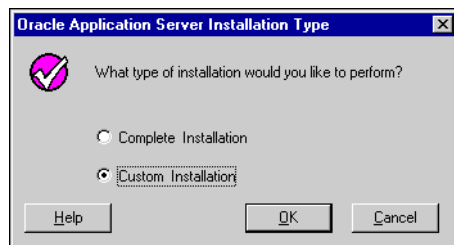
3. Select Add Components.

Figure 2–25   Add Components
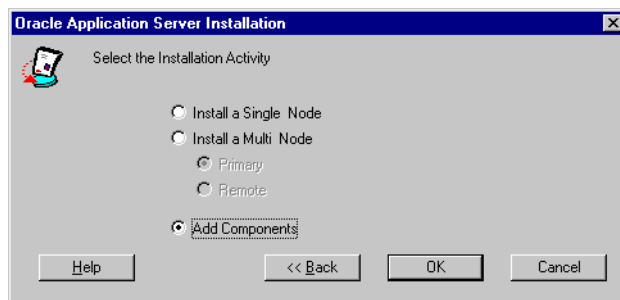
4. Select which components you want to install on this node.

Figure 2–26   Product components
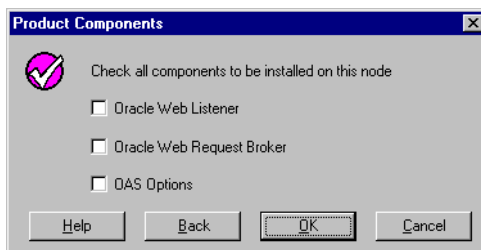
5. Select which cartridges/options you want to install.

(You will only receive this form if you elected to install Oracle Application Server Options in the previous step.)

Figure 2–27   Options/cartridges
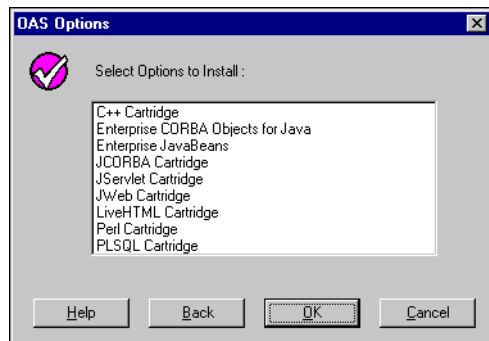
Select which options/cartridges you want to install on this node. For a description of each cartridge, see the *Oracle Application Server Overview.*

6. Enter information about your site.

Figure 2–28   Site information
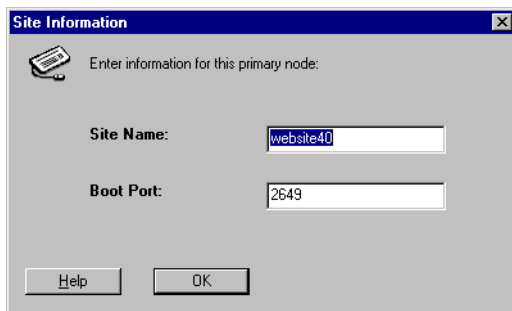
- **Site Name** - Defaults to "website40". Oracle Application Server allows you to have multiple server sites running in a single installation environment. Servers are differentiated by site names, so you must enter the current Web server by site name. The site name should be the same in all nodes which comprise a site.
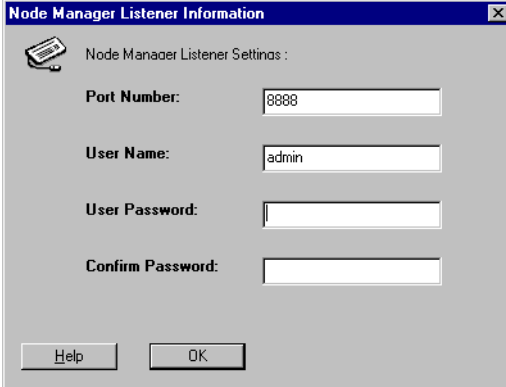
■ **Boot Port** - Defaults to 2649. Select a port that is not being used by another process. If you are migrating from previous versions or installing more than one version of Oracle Application Server on one machine, you **must** select a different port than the one used for the previous version.

The Installer uses the boot port you specify and the next two consecutive ports. For example, if you select port 2649, be sure that ports 2650 and 2651 are also available.

7. Enter information about the Node Manager Listener.

Figure 2–29   Node Manager Listener settings

The Node Manager Listener is the Web-based tool used to administer all components of the Oracle Application Server (except for the Web Request Broker). It must be present on each node in a multi-node site. This listener cannot execute cartridges and is not configurable.

■ **Port Number** - Enter a network port for the Node Manager Listener. The default port number is 8888, but any available port may be used. The valid range is between 1 and 65535. Select a port that is not being used by another process. If you are migrating from previous versions or installing more than one version of Oracle Application Server on one machine, you **must** select a different port than the one used for the previous version.

■ **User Name** - This is the name of the Oracle Application Server user who will perform administration tasks using the Oracle Application Server Manager. The default value is "admin", but any user name may be used.

- **User Password** - Enter a password for the admin user. You will be asked to enter your password twice for confirmation. There is no default value for this password. This password will also be used to authenticate for the Administration Utilities Listener.

- **Confirm Password** - Enter the password again for confirmation.

8. Enter Group Messaging information. Enter the Mulicast IP address and Port number to be used for internal site wide group messages. After entering a valid IP address and Port number, make note of the numbers. If you plan to setup remote nodes, you will need the information during the remote node installation. If you forget to record the IP Address and Port number, you can use the OASMCASTCFG utility to display the numbers. See the Administration Guide for more information.

Figure 2–30   Group Messaging screen
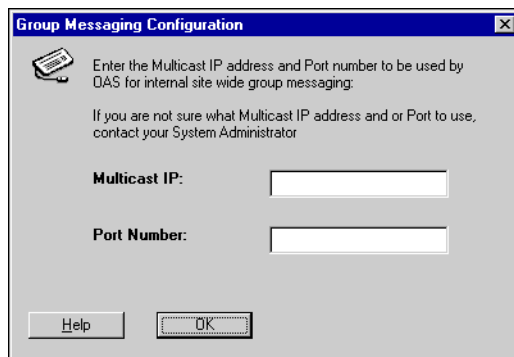
Oracle Application Server requires a designated IP address and port number for internal communication between components.

- **IP Address** - Enter an IP address not being used. The valid range is from 225.0.0.0 to 239.255.255.255.

- **Port Number** - Enter a port number not currently being used. By default, the following ports are used by Oracle Application Server:

Table 2–3   Ports used

Ports Used	Component
80 (default)	Web Listener
8888 (default)	Node Manager Listener
8889 (by default, Node Manager port + 1)	Admin Utility Listener
2649 (default)	Boot Port
2650, 2651 (by default, the Installer uses the Boot Port plus the next two ports)	Installer

9. Enter the port number for the Administration Utility listener. Select a port that is not being used by another process. If you are migrating from previous versions or installing more than one version of Oracle Application Server on one machine, you **must** select a different port than the one used for the previous version.

Figure 2–31   Administration Utility Listener
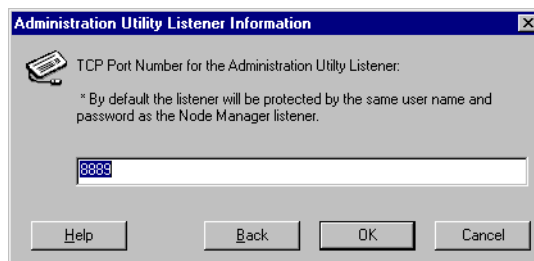
The default value is 8889. The Administration Utility Listener is protected by the same user name and password as the Node Manager Listener.

10. Enter information about the Oracle Web Listener.

(You will only receive this form if you elected to install the Oracle Web Listener in step 3.)

Figure 2–32   Web Listener configuration
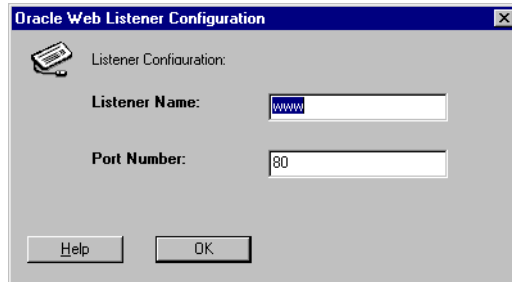
- **Web Listener Name** - During installation, a web listener is set up for general usage requests. The default Web Listener name is "www".

- **Port Number** - Enter the port number on which this listener should run (for the Oracle Web Listener, the default port is 80). Select a port that is not being used by another process. If you are migrating from previous versions or installing more than one version of Oracle Application Server on one machine, you **must** select a different port than the one used for the previous version.

YOU HAVE COMPLETED THE INSTALLATION! See Chapter 3, "Post-Installation Tasks" to configure Oracle Application Server.

Automatic Startup

If you want to set up Oracle Application Server so that it will automatically start up when you reboot your Windows NT machine, complete the following steps:

1. From the Start menu, choose Settings > Control Panel > Services.

2. Select the **OracleStartOAS 4.0(*ORACLE_HOME,website_name*)** service, and modify its startup properties to be Automatic.

When your machine boots up, the following processes will now be started automatically:

On the primary node,

- WRB

- ORB

- www listener, admin listener, and any other configured listeners on your primary node

On remote cartridge nodes,

- the **wrksf** process

On remote listener nodes,

- all configured listeners

Note: This service is for automatic startup only and should not be used to start and stop Oracle Application Server. Please use the OAS Manager to start and stop Oracle Application Server.

Removing Oracle Application Server

Note: To remove Oracle Application Server, you must use the Oracle Installer on the CD that was used to install Oracle Application Server.

To remove Oracle Application Server, use the following steps:

1. Ensure that all Oracle Services are stopped.

    a. From the Welcome page, select OAS Manager.

    b. Click on the Site.

    c. In the right column, select All and then click on the stop icon.

    (You can alternatively use the command "`owsctl stop`".)

2. Stop the Node Manager using the command:

    `owsctl stop -nodemgr`

3. Make sure that all Oracle Application Server processes have been stopped.

    Use the NT Task Manager for a list of processes and for a list of services, select Services from the Control panel.

4. Start the Oracle Installer (the same one used to install Oracle Application Server 4.0.8).

5. Select Oracle Application Server 4.0.8 in the right column and click Remove.

Figure 2–33   Software Asset Manager
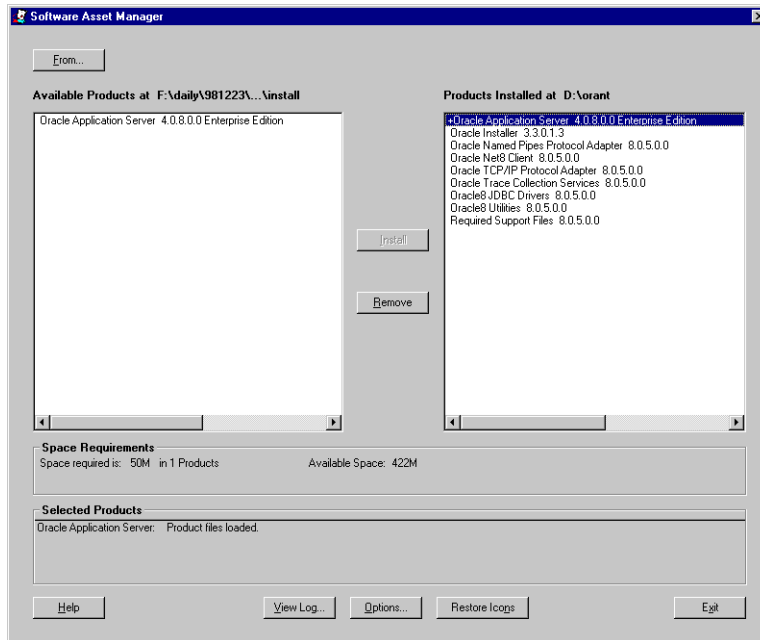
6. Confirm the name of the site to be removed.

7. The Installer will prompt you for responses during the deinstallation.

8. (Netscape Servers only) Restore the old configuration to the **obj.conf** file:

   ■ For Netscape Enterprise Server, in the **%Netscape Server Home%\https**-*wrb_configured_server_name***config** directory, move the **obj.conf** file and restore the old configuration from **obj.conf.sav**.

   ■ For Netscape FastTrack Server, in the **%Netscape Server Home%\httpd**-*wrb_configured_server_name***config** directory, move the **obj.conf** file and restore the old configuration from **obj.conf.sav**.

3

Post-Installation Tasks

This chapter briefly explains how to start Oracle Application Server and how to connect to the Node Manager and Administration Utilities listeners. For complete instructions about configuring Oracle Application Server, see the *Oracle Application Server Administration Guide.*

Contents

- Post-Installation Tasks
- Starting Oracle Application Server using the OAS Manager
- Using Separate ORACLE_HOMEs
- Command-Line Utilities

Post-Installation Tasks

You may receive further prompts if the Installer has to install any other Oracle products required by Oracle Application Server. The Installer notifies you when installation is complete and prompts you to proceed to the post-installation steps.

If you installed a remote node as part of a multi-node installation, you must add the remote node to your Oracle Application Server website. For information about adding a remote node, see the *Oracle Application Server Administration Guide.*

Starting Oracle Application Server using the OAS Manager

1. Connect to the Welcome page.

   a. Use your Web browser to connect to:

   http://*hostname.domain:port_number*

where *port_number* refers to the port number you specified for the Node Manager during installation.

For example:

http://paris.worldcup:8888

Note: If you use Internet Explorer 4.01 to connect to the OAS Manager through a proxy server and receive the error message, "The request did not specify a valid virtual host," turn off the "Use HTTP 1.1 through proxy connections" switch. This can be located by opening View > Internet Options > Advanced, and scrolling down to the HTTP 1.1 Settings section.

---

b. Enter the Node Manager username and password recorded during installation. The Welcome page appears:

Figure 3–1   Welcome page
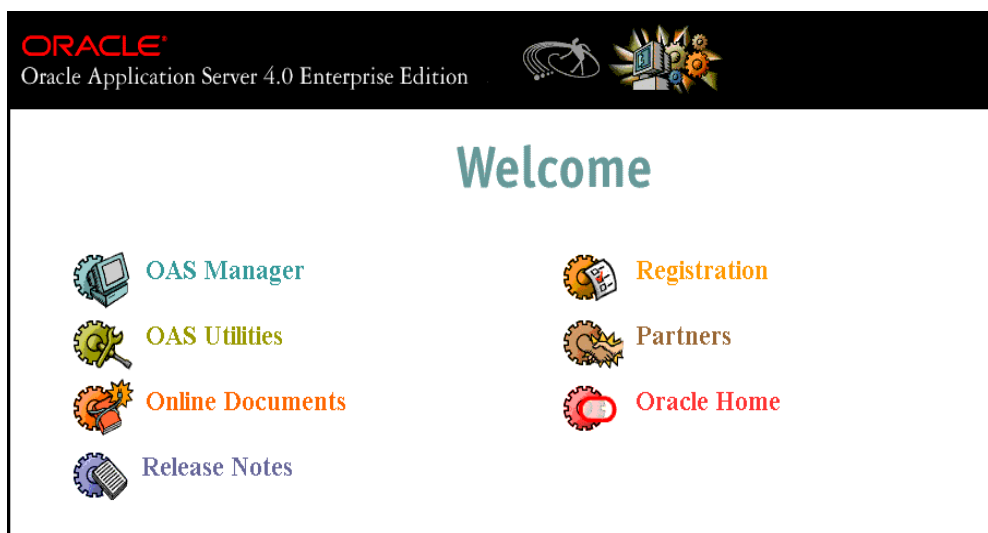
2. Bring up the OAS Manager page.

Once connected to the Welcome page, click on the OAS Manager icon. This brings up a Web page with two columns. On the left is the name of your Web

site ("website40" by default) and on the right is a table showing the status of the Web site.

3. Select All and click the green "Start" button ▶.

Figure 3–2   Web Site page
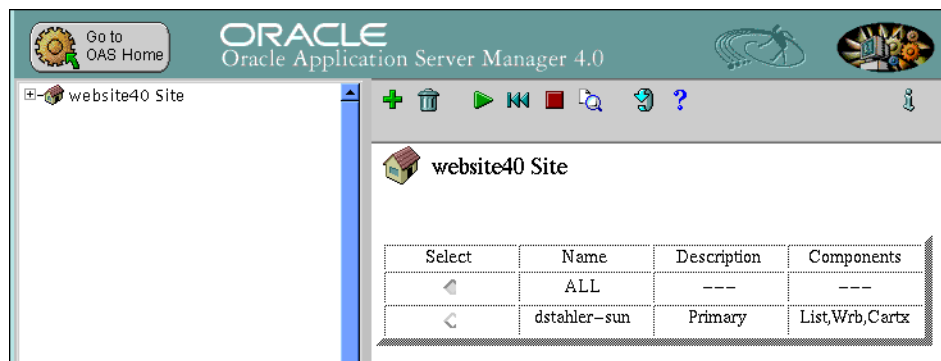
This action automatically starts the following components:

- the Oracle Request Broker (ORB)
- all Web Request Broker (WRB) processes
- all configured listeners

An HTML page appears with messages about the processes being started. If all processes are correctly started, you can click OK at the bottom of the page.

4. Verify that the components have started.

Expand the navigation tree in the left column by clicking the "+" next to the name of your Web site (the default is "website40"). This shows the three principal components of Oracle Application Server:

- Oracle Application Server
- HTTP Listeners
- Applications

Clicking on any of these components reveals a status table about the component and its associated processes. For example, click on Oracle Application Server to verify if all of the processes have started. This form has information

about each process, including a Status field that indicates whether or not the process is up (with a green flag) or down (with a red flag).

> **Note:** When you start an application you will only see red flags. This is normal and happens because the processes have not had a request yet.

Figure 3–3   OAS Status form
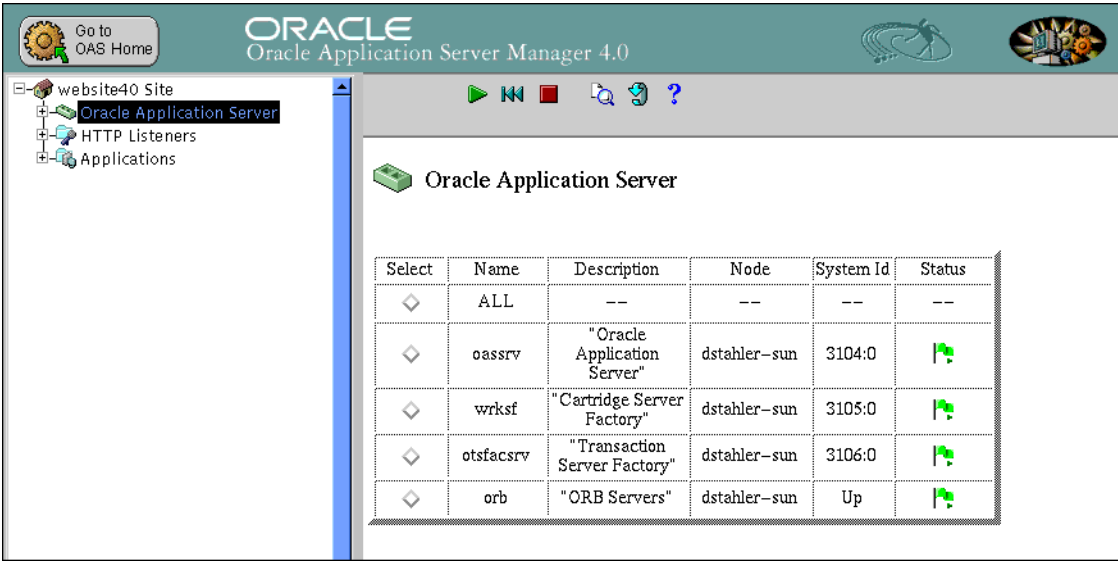
The same process works for the remaining two components.

Connect to the OAS Utilities Page

All of the utilities included with Oracle Application Server can be accessed from the OAS Utilities page. Use the OAS Utilities page for such tasks as configuring the Logger or registering an external listener. The OAS Utilities page is located at *host-name.domain*:8889 by default. You can enter its URL in your Web browser, or:

1. Click the ![Go to OAS Home] icon at the top of the page.
2. Click the OAS Utilities icon ![icon] .

3. Expand the navigation tree by clicking the "+" next to Utilities. This displays the Oracle Application Server utilities.

Figure 3–4   OAS Utilities
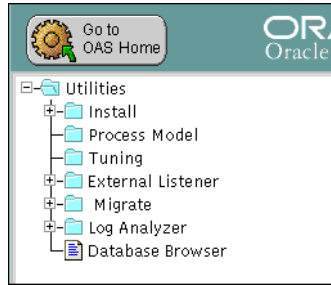
Use the Help pages or the *Oracle Application Server Administration Guide* for further information.

> **Note:**   If you are **migrating**, see Chapter 4, "Migrating From Previous Versions".

Using Separate ORACLE_HOMEs

Oracle Application Server 4.0.8 cannot be installed in the same ORACLE_HOME as **any** other Oracle products including RDBMS and earlier versions of Oracle Application Server. Hence, during the installation, you need to specify a new ORACLE_HOME. If you will be running Oracle Application Server and a database you must install the Oracle Application Server and the database under different ORACLE_HOMEs:

1. Install Oracle Application Server under a different ORACLE_HOME.

2. Go to the Control Panel and double click on Services.

3. Change the startup mode of the OracleTNSListener service to Manual.

4. Reboot the machine.

   Note that the Oracle Application Server Manager should be up, but the database cannot because of the change to ORACLE_HOME.

5. Select the database home using the Oracle Home Selector from Start > Programs > Oracle for Windows NT.

This changes the PATH to point to the correct ORACLE_HOME binaries.

6. Open a Command Tool shell, and perform the following:

   a. Unset the ORACLE_HOME environment.

   ```
   C:\> set ORACLE_HOME=
   ```

   b. Connect to the database and start it using the **svrmgr** utility.

   ```
   C:\> svrmgr30
   SVRMGR> connect internal/oracle
   SVRMGR> startup
   SVRMGR> exit
   ```

   c. Start the TNS Listener.

   ```
   C:\> start tnslsnr80
   ```

   Note: When the user logs out, the Listener process will die because it was started manually. The TNS Listener must be restarted (with ORACLE_HOME unset) when the user logs in again. When the database and OAS 4.0 run in parallel under different ORACLE_HOMEs, Net8 (or SQL*Net if the database is Oracle7) should be used to connect to the database.

Command-Line Utilities

Oracle Application Server provides several command-line utilities that perform the same functions as the OAS Manager performs from your browser. This section contains a brief summary of the available utilities. For a complete discussion of the command-line utilities, see the *Administration Guide*.

Note: Do not combine these tools to start and stop your website. For example, if you started the website using the OAS Manager (by selecting the name of the site and clicking the ▶ icon), you should not stop it using a command-line utility (`owsctl stop`). Use the same tool to start and stop Oracle Application Server components.

The **owsctl** utility is used to stop, start, and monitor the status of the Web Request Broker (WRB), Object Request Broker (ORB), and listeners.

You must have the following environment variables set:

- **ORAWEB_HOME** - This is the absolute path where Oracle Application Server is installed, and should be **%ORACLE_HOME%\ows\4.0**.

- **ORAWEB_SITE** - This is the site name for Oracle Application Server.

- **ORACLE_HOME** - This is the absolute path where you install Oracle products. You must designate separate ORACLE_HOMEs for every installed product. For a summary of **owsctl** syntax, type:

```
owsctl -h
```

Examples

The following are some simple examples of the **owsctl** utility:

The command:

```
owsctl start
```

will start the WRB, the ORB, and the listeners.

To start the Node Manager, enter the command:

```
owsctl start -nodemgr
```

To shutdown your website, enter:

```
owsctl stop
```

To shutdown the Node Manager, enter:

```
owsctl stop -nodemgr
```

Security

Many of the commands available with Oracle Application Server, whether discussed in the documentation or not, can be used to change important settings. For example, anyone with access to the files on the machine where Oracle Application Server is installed can change passwords for the site. For this reason, you should use operating system protections to protect your site.

For more information, see "Restricting Access to the oaspasswd Utility" in Appendix A of the *Administration Guide*.

4

Migrating From Previous Versions

This chapter describes migrating from previous versions to Oracle Application Server. The migration is performed using a utility that copies configuration information about Oracle Application Server components, such as listeners and applications, from a previous installation of Oracle Application Server 4.0.7.x or 4.0.8 to a newly installed Oracle Application Server Release 4.0.8.1.

In This Chapter

-
-

Before you Migrate

The intent of the migration utility is to migrate a previous version of Oracle Application Server 4.0.7.x or 4.0.8.x to a newly installed version of Oracle Application Server Release 4.0.8.x. You should not migrate to a version of Oracle Application Server Release 4.0.8.x which you have already configured. The migration utility may overwrite Release 4.0.8.x configuration information with the configuration information of the previous version. If you want to migrate from a version earlier than 4.0.7.x, you must first migrate to version 4.0.7 and then migrate from 4.0.7 to version 4.0.8.x. The following sections illustrate some points to consider before migrating.

DADs

If you have a DAD configured in your Oracle Application Server 4.0.7.x or 4.0.8.x named "Bob", and a DAD also named "Bob" in Oracle Application Server Release

4.0.8.x, the migration utility will not migrate the 4.0.7.x or 4.0.8.x "Bob" DAD. In this example, to migrate Bob, the 4.0.7.x or 4.0.8.x DAD, you could rename it "Bob30" before migration.

Virtual Paths

The migration utility does not check to see if there are virtual path collisions between the previous version and Oracle Application Server Release 4.0.8.x. Before you migrate, check to see that each Release 4.0.8.x virtual path is not also used in the previous version.

Permissions

Before migrating from a previous version of Oracle Application Server, make sure that the migration utility (which runs under the Release 4.0.8.x user) has permission to access the configuration files of the previous version. Otherwise the migration utility will display an error message saying that the configuration files are not accessible.

Not Migrated

The following are not migrated from previous versions:

- sample applications
- third-party listeners
- transactions

    (You must add these manually after the migration. See the *Administration Guide* for more information.)

- MIN/MAX cartridge parameters

    (You must manually reset any MIN/MAX parameters after migration.)

- VRML cartridges

    (VRML cartridges are not supported in Release 4.0.8.1.)

SSL Certificates

If you are upgrading from a version of Oracle Application Server prior to 4.0.8, you **must** upgrade your old private key. See the SSL chapter in the *Security Guide* for instructions.

Migrating from Oracle Application Server 4.0.x

The migration utility allows migration from the following Oracle Application Server versions:

- 4.0.7
- 4.0.7.1
- 4.0.8

If you want to migrate from a version earlier than 4.0.7.x, you must first migrate to version 4.0.7 using the OAS 4.0.7 utility and then use the OAS 4.0.8 utility to migrate from 4.0.7 to version 4.0.8.

Duplicate Application File Names

During the migration, the utility will not overwrite any configuration information if there are duplicate names. If a 4.0.x application or cartridge also exists in Release 4.0.8.1, the migrate utility will not migrate it. To allow the migration utility to over-write Release 4.0.8.1 applications, remove or rename them and then perform the migration.

Steps for Migrating the Primary Node

> **Note:**   When migrating, you must use the same primary node as the one use in the previous version.

1. Install Oracle Application Server Release 4.0.8.x.

2. Connect to the migration utility by clicking OAS Utilities from the Welcome page on the primary node. Expand the tree under Utilities, and then click on Migrate.

3. Expand the tree structure under the appropriate version 4.0.7.x or 4.0.8.x.

4. Select Primary Node.

5. Enter the location (ORACLE_HOME) of the Oracle Application Server version to be migrated.

   The following components are migrated automatically:

   - WRB
   - listeners (local)

- cartridges/applications

In addition to the above components, all default processes are preserved, but any Oracle Application Server processes that you may have added manually (for example, another logger process such as **wrblog**) are not migrated.

Steps for Migrating Remote Node Listeners

1. Once the primary node migration process is completed, expand the Utilities tree, click on Migrate, select 4.0.x, and select Remote Node(s)

2. Make sure the Node Manager is UP and running on all nodes that have listeners to be migrated.

3. The migrate utility prompts you with a list of candidate remote nodes which have configured listeners running on them. You only have to migrate those remote nodes that have configured listeners.

4. Select the remote node to be migrated and enter the ORACLE_HOME.

Undoing the Migration

All configuration files that are modified are backed up. The configuration files that are modified are: **wrb.app** and **site.app** in the primary node and the **owl.cfg** file in each node in the site that have listeners configured in them.

During migration, these files are modified and backed up as:

- **wrb.app** > **mig_wrb.bak**

- **site.app** > **mig_site.bak**

- **owl.cfg** > **mig_owl.bak**

If a fatal error occurs during migration of the configuration information in these files, they are automatically rolled back into the pre-migration state. This roll back does not happen if the migration encounters non-fatal errors such as "Duplicate application name" or "Duplicate listener name".

If you want to undo the effects of a migration, the above backup files can be manually rolled back. You may want to do this in case of an abnormal termination of the migration or you are not satisfied with the migration.

What Really Happens During the Migration?

Migrating the WRB

During a migration, the migrate utility:

- copies all the existing authentication configuration information from the 4.0.x **wrb.app** file to the Release 4.0.8.x **wrb.app** file

- copies all DADs from Oracle Application Server 4.0.x to Release 4.0.8.xTwo new variables are created in the Registry:

  - ORACLE_HOME40x is created and set to the 4.0.x ORACLE_HOME.

- ORAWEB_HOME40x is created and set to the 4.0.x ORAWEB_HOME.

Migrating Listeners

For each listener, the migrate utility:

- creates listener directories and updates the **owl.cfg** file with listener information

- copies the listener configuration files from Oracle Application Server 4.0.x to Oracle Application Server Release 4.0.8.x

- modifies the configuration files to update the directory paths for [Multiport] section, ServerPID, AdminFile, and Adapter file fields

- declares the listeners as Services

Migrating Applications

The migrate utility identifies all applications deployed in Oracle Application Server 4.0.x and the selected Website.

For each application, the migrate utility:

(non-JCO application)

- extracts the application parameters from the **wrb.app** file and builds a new parameter file

- stores this new file **%ORAWEB_HOME%\install**

- registers the new file with Oracle Application Server Release 4.0.8.x

- for each cartridge registered with the application:

  - extracts the cartridge parameters from Oracle Application Server 4.0.x and constructs a new cartridge configuration file

- registers the new cartridge configuration file with Oracle Application Server Release 4.0.8.x

- stores the new file in **%ORAWEB_HOME%\install**

(JCO application)

- extracts the **.jar** file location of the application from the **wrb.app** file

- passes the **.jar** file to the JCO application deployment utility and regenerates a new file

- registers the new file with Oracle Application Server Release 4.0.8.x

A

Integration with Enterprise Manager

Contents

Introduction

This chapter provides instructions for establishing a connection between Oracle Application Server and the Enterprise Manager (EM), Oracle's enterprise-wide system management tool included with Oracle**8**. For further information about using and configuring Oracle Application Server with the EM, see the *Oracle Enterprise Manager Administrator's Guide* or the *Oracle Enterprise Manager Configuration Guide.*

Overview of the Enterprise Manager

The Enterprise Manager manages distributed Oracle systems using three main components:

Component	Function
Console	The Console gives you a central point of control for the Oracle environment through an intuitive graphical user interface (GUI) that provides powerful and robust system management.
Oracle Management Server	The Oracle Management Server provides distributed control between clients (database) and managed nodes (Oracle Application Server). As a central engine for notification, it processes all system management tasks and administers the distribution of these tasks across the enterprise.
Agent	The Agent is a process that runs on managed nodes (Oracle Application Server) in the network. It functions as the executor of jobs and events sent by the Console via the Oracle Management Servers. The Agent can function regardless of the status of the Console or network connections.

Note: The Oracle Application Server is not required if you start the Enterprise Manager database administration applications as separate stand-alone applications. For more information, see the *Oracle Enterprise Manager Configuration Guide*.

Enterprise Manager Integration Steps

Note: You must have the Enterprise Manager Intelligent Agent, EM, installed on the machine running Oracle Application Server to integrate it with the EM. Do not install EM in the same ORACLE_HOME as Oracle Application Server.

The following instructions integrate Enterprise Manager with Oracle Application Server:

1. Start the Node Manager on Oracle Application Server.

2. Run the Enterprise Manager integration scripts manually.

> **Note:** The Enterprise Manager Intelligent Agent must be stopped
> before running the integration scripts. The lsnrctl utility is used to
> stop, start, and monitor the agent.
>
> To determine the status of the agent,
>
> - Open Services from the Control Panel.
> - Scroll down to **OracleAgent80** and select Status.
>
> If the agent is running,
>
> - Open Services from the Control Panel.
> - Scroll down to **OracleAgent80** and select Stop.

```
% C:\> %ORAWEB_HOME%\install\updatetcl %ORACLE_HOME%\net80 /
\agent\config\nmiconf.lst nmiows.tcl
```

3. Verify that the Oracle Application Server is installed on the machine running the Enterprise Manager, EM.

   a. Restart the Oracle Installer and select Custom Installation.

   b. View the list of products installed to see if the Oracle Application Server has been installed. If it has not been installed, do so now. Do not install.

4. Start the Agent on the machine running Oracle Application Server.

   a. Open Services from the Control Panel.

   b. Scroll down to **OracleAgent80** and select Start.

5. Run the Auto-Discovery Tool from the Enterprise Manager.

   a. Select Programs > Oracle Enterprise Manager > Enterprise Manager.

   b. Enter a Username and Password for the database.

c. From the Oracle Enterprise Manager window, select <u>N</u>avigator > Service Discovery > Discover New Services.

Figure A–1   Discover New Services
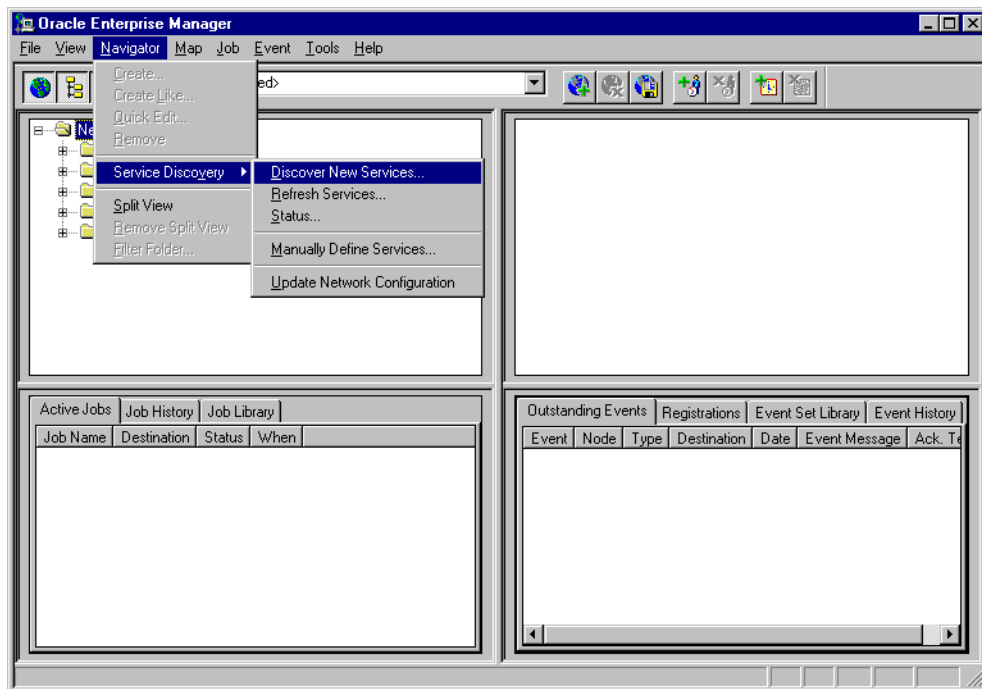
d. Select Next at the Introduction screen.
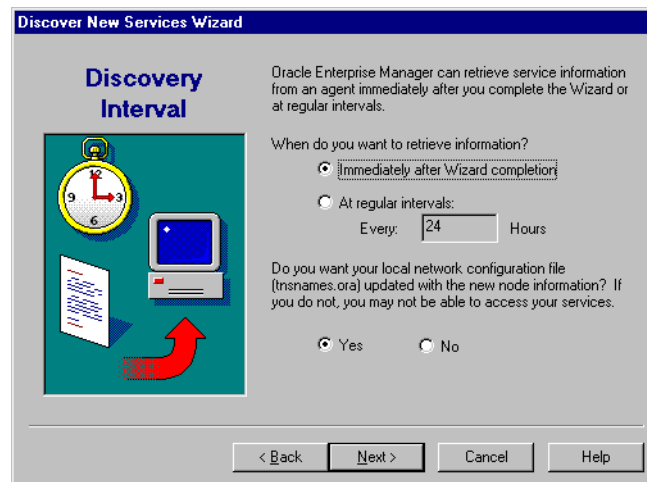
e. The Discover New Services Wizard appears.

f. Enter the name of the node on which Oracle Application Server is running and Select Add, then Next.

Figure A–2   Adding a node
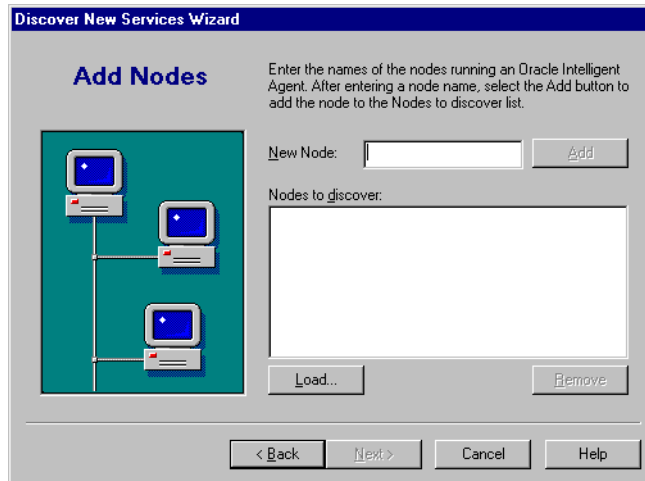
The Discovery Interval screen appears.

Figure A–3   Discovery Interval

g.   Enter your selections for when you want to retrieve information and if you want to update the **tnsnames.ora** file and select Next.

The Summary page appears.

h.   Select Finish if the information is correct.

i.   The Wizard begins searching for the specified node.

j.   Select Close when the Discover New Services tool has located the node running the Agent.

Figure A–4   Discover New Service tool
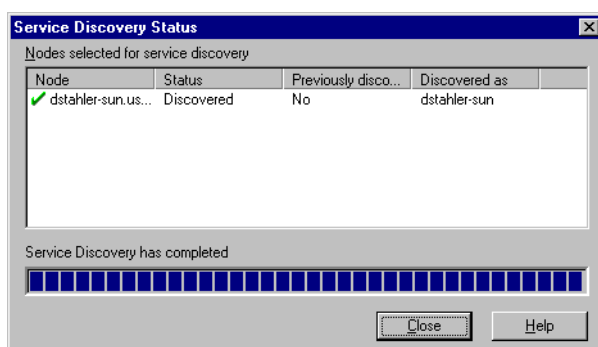
k.   Expand the Application Servers folder under Networks.

l.   Highlight your Oracle Application Server listener and select Navigator > Quick Edit. (You can also right-click on the Oracle Application Server listener.)

This action launches a browser window and prompts you with the required username and password specified during installation.

YOU HAVE COMPLETED THE INTEGRATION!

Index